

TAXONOMIC STUDIES ON SOME SPIDERS OF THE GENERA *GNAPHOSA*  
LATREILLE, *HAPLODRASSUS* CHAMBERLIN AND *SCOTOPHAEUS*  
SIMON ( FAMILY : GNAPHOSIDAE ) FROM INDIA.

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INTRODUCTION

The spiders of the family Gnaphosidae are very little known in the Indian Fauna. Pocock (1900) on Indian spiders contains no reference to this family. Caporiacco (1934) was the pioneer worker and he has described 10 species of various genera from Himalaya. Recently Tikader (1962,66,73) described two species of *Gnaphosa* and two species of *Scotophaeus* from India. Patel and Patel (1975) described one species of *Scotophaeus* from Gujarat. Tikader & Gajbe (1977 a, b, c,) described two more species of *Gnaphosa*, 2 more species of *Haplodrassus* and one species of *Scotophaeus*. Tikader (1982) in his fauna of India series described two more species of *Scotophaeus* and one species of *Haplodrassus*.

While studying the spider collections of the family Gnaphosidae, I came across four new species of the genera *Gnaphosa*, *Haplodrassus* and *Scotophaeus* which are described in this paper.

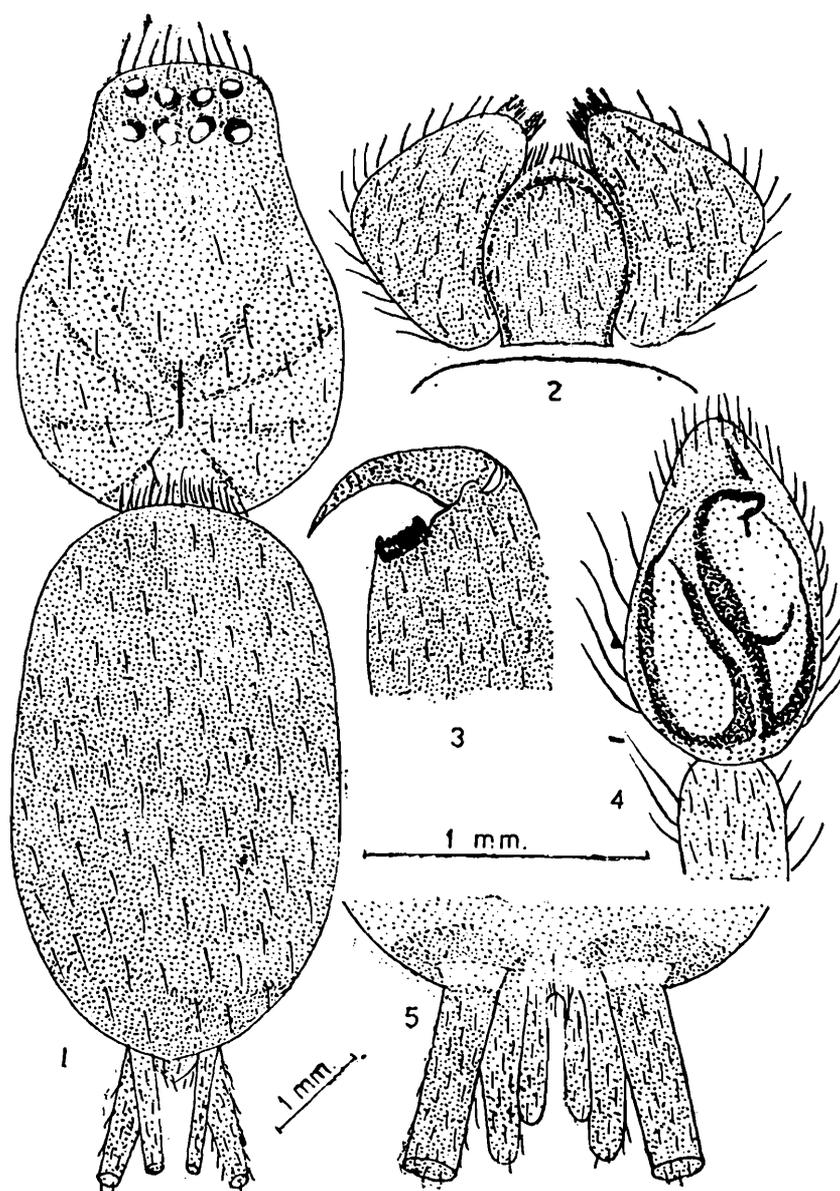
All type specimens are deposited in the National Zoological Collection, Zoological Survey of India, Calcutta.

1. *Gnaphosa rohtakensis* sp. nov.

*General* : Cephalothorax and legs reddish-green ; abdomen brownish-black. Total length 9.80 mm. Carapace 4.40 mm. long, 3.00 mm. wide ; abdomen 5.50 mm. long, 3.20 mm. wide.

*Cephalothorax* : Longer than wide, narrowing in front, slightly convex, clothed with long spinelike hairs ; posterior middle provided with conspicuous short fovea ; radiating streaks diverging from fovea to lateral sides of carapace. Eyes pearly white except anterior medians which are black ; posterior row longer than anterior row ; anterior row of eyes slightly procurved (as seen from in front), slightly smaller than laterals and closer to adjacent laterals than to each other ; posterior row of eyes slightly recurved with posterior medians conspicuously silvery white in colour, oval, slightly

larger than laterals and closer to each other than to adjacent laterals ; ocular area provided with small black setae ; median ocular quadrangle longer than wide, wider in front than behind. Clypeus provided with alternate short and very long setae as in fig. 1. Clypeal height more than diameter of anterior median eye. Chelicerae vertical, strong, clothed with long spinelike hairs, outer margin provided with one



Figs. 1-5. *Gnaphosa rohtakensis* sp. nov.

1. Dorsal view of Male, legs omitted. 2. Labium and maxillae. 3. Left chelicera. 4. Left male palp (ventral view). 5. Spinnerets.

small tooth and inner margin with sclerotized ridge as in fig. 3. Labium and maxillae longer than wide, clothed with black setae ; anterior portion provided with scopulae, with shape as in fig. 2. Sternum heart-shaped, narrow behind, rebordered laterally, clothed with black hairs. Legs relatively long, stout, clothed with hairs and spines ; leg formula 4123. Male palp as in fig. 4 Female unknown,

*Abdomen* : Longer than wide, nearly elliptical, uniform, clothed with long black hairs ; ventral side lighter than dorsal. Spinnerets prominent, clothed with small hairs as in fig. 5.

*Type-specimen* : *Holotype* male in spirit., other details as below

*Type locality* : India, Uttar Pradesh, Kalhwar on Rohtak-Delhi road, Rohtak Dist. 5. III. 1971. Coll *Asket Singh*.

This species closely resembles *Gnaphosa poonaensis* Tikader but differs from it as follows (i) Abdomen uniform but in *G. poonaensis* abdomen provided with chevrons (ii) Male palp structurally different in tibial apophyses and distally expanded tip of the embolus.

## 2. *Haplodrassus ambalaensis* sp. nov.

*General* : Cephalothorax and legs deep brown , abdomen reddish-green. Total length 6.40 mm. Carapace 2.30 mm. long, 1.90 mm. wide ; abdomen 4.20 mm. long, 2.20 mm. wide.

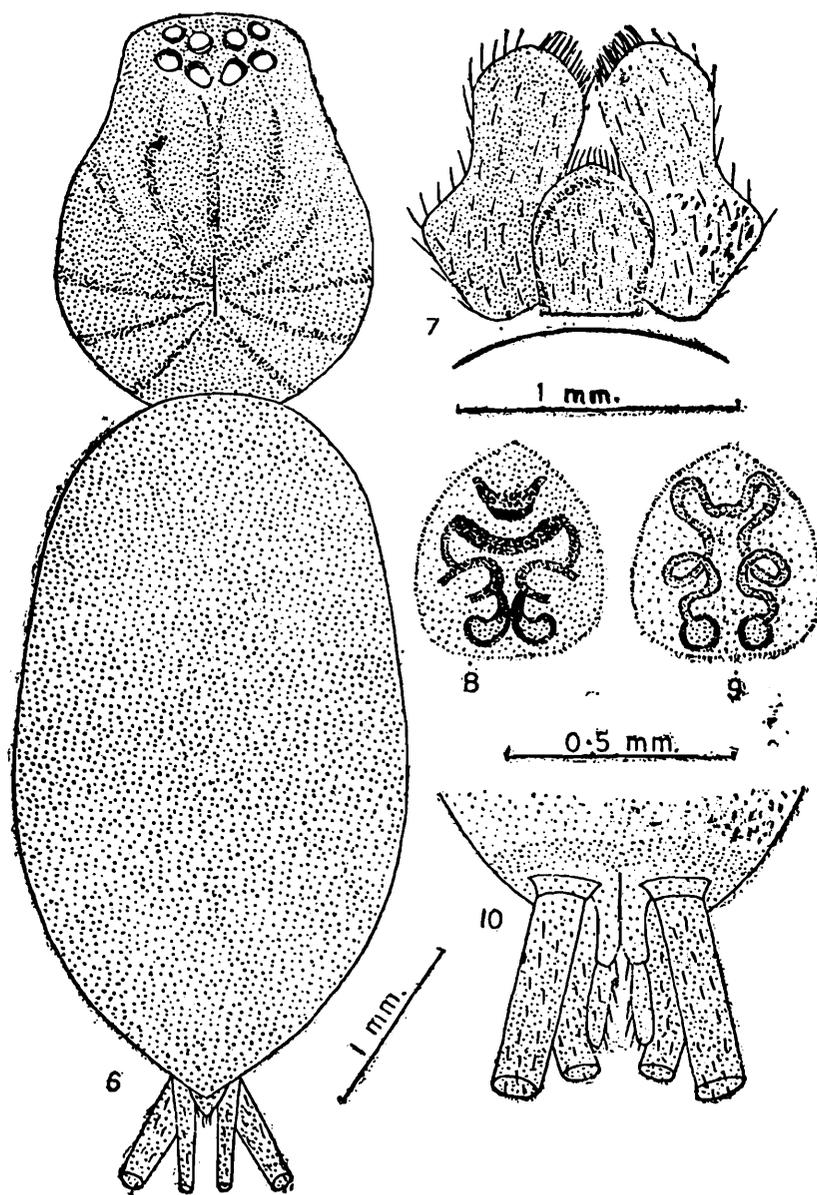
*Cephalothorax* : Longer than wide, broad in front, clothed with pubescence ; posterior middle provided with conspicuous fovea ; radiating streaks diverging from fovea to lateral sides of carapace ; cephalic region slightly high. Eyes pearly white except anterior medians which are black ; posterior row of eyes slightly longer than anterior row ; anterior row procurved (as seen from in front), with medians slightly larger than laterals and closer to adjacent laterals than to each other ; posterior row of eyes procurved, with medians oblique, larger than laterals and much closer to each other than to adjacent laterals as in fig. 6 : median ocular quadrangle longer than wide and wider in front than behind. Clypeal height greater than diameter of anterior median eye. Sternum heart-shaped, pointed behind, rebordered, clothed with fine hairs. Chelicerae moderately strong ; inner and outer margins provided with two and three teeth respectively. Labium and maxillae longer than wide ; anterior end of maxillae provided with conspicuous scopulae, with shape as in fig. 7. Legs relatively long and strong, clothed with hairs and spines ; metatarsi and tarsi of I and II provided ventrally with conspicuous scopulae and tarsi with prominent claw tufts ; leg formula 4123. Male unknown.

*Abdomen* : Longer than wide, narrowing anteriorly, widest behind middle, clothed with pubescence ; ventral side lighter than dorsal. Epigyne as in fig. 8. Spermathecae as in fig. 9. Spinnerets as in fig. 10.

*Type-specimen* : *Holotype* female in spirit, other details as below.

*Type locality* : INDIA, Punjab, Rupar, Ambala district, 14-1-1964, Coll. *T. D. Soota*.

This species resembles *Haplodrassus tehriensis* Tikader & Gajbe but differs from it as follows : (i) Carapace without W-shaped deep brown marking seen in *H. tehriensis*



Figs. 6-10. *Haplodrassus ambalaensis* sp. nov.

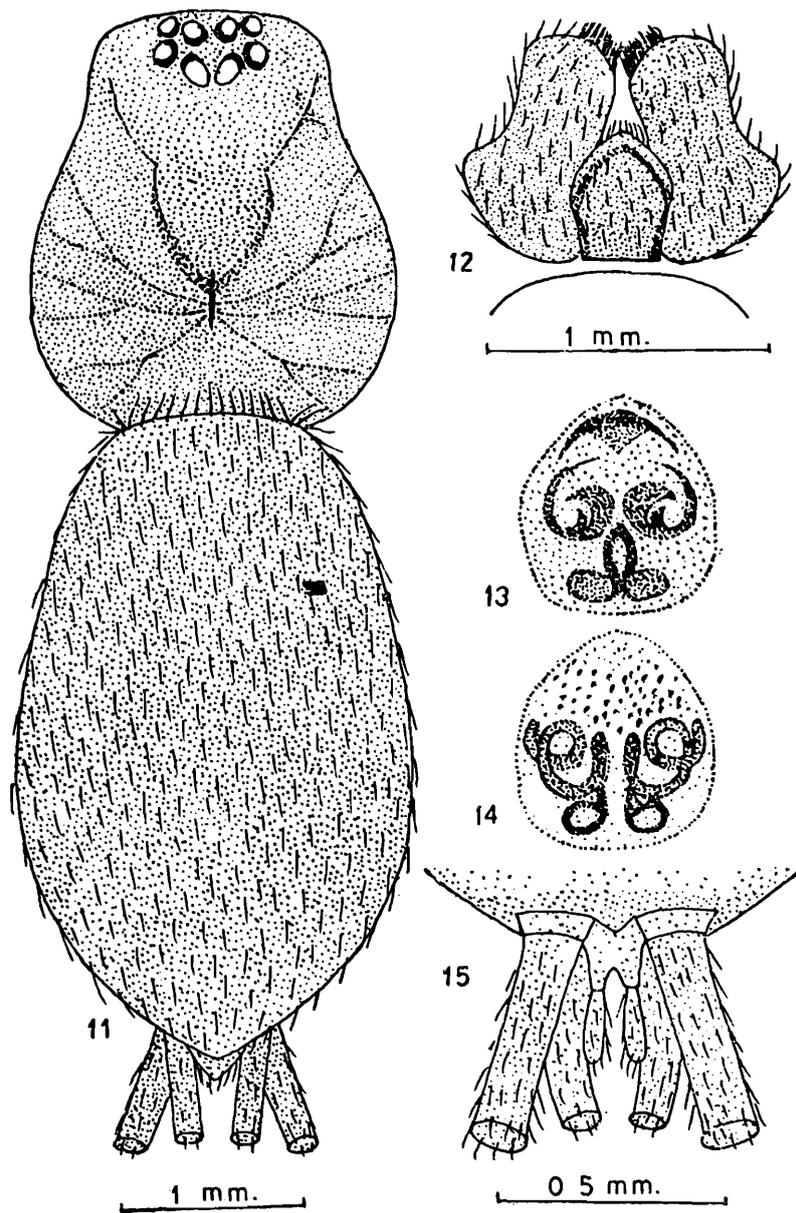
6. Dorsal view of female, legs omitted. 7. Labium and maxillae. 8. Epigyne.  
9. Spermathecae. 10. Spinnerets.

and with W-shaped conspicuous deep brown marking just above fovea. (ii) Abdomen without the brownish patches seen in *H. tehriensis*. (iii) Epigyne and spermathecae also structurally different as without concave lateral arms of the epigynum and spermathecae not elongate but oval.

### 3. *Haplodrassus bengalensis* sp. nov.

**General :** Cephalothorax and legs reddish green ; abdomen deep yellowish-green. Total length 6.30 mm. Carapace 2.60 mm. long, 2.10 mm. wide ; abdomen 3.80 mm, long, 2.20 mm. wide.

*Cephalothorax* : Longer than wide, broad in front, clothed with pubescence and some hairs, posterior to middle provided with conspicuous fovea with radiating streaks



Figs. 11-15. *Haplodrassus bengalensis* sp. nov.

11. Dorsal view of female, legs omitted. 12. Labium and maxillae. 13. Epigyne. 14. Spermathecae. 15. Spinnerets.

diverging from fovea to lateral sides of carapace. Eyes pearly white except anterior medians which are black; posterior row of eyes slightly longer than anterior row; anterior row of eyes procurved (as seen from in front), with medians very slightly smaller than laterals and closer to adjacent laterals than to each other; posterior row of eyes procurved, with medians oblique, larger than laterals and much closer to each other than to adjacent laterals as in fig. 11. Median ocular quadrangle longer than wide, wider in front than behind. Clypeal height greater than diameter of anterior

median eye. Chelicerae moderately strong, vertical; inner and outer margins provided with two and three teeth respectively. Sternum heart-shaped, pointed behind, rebordered, clothed with fine hairs. Labium and mixillae provided with conspicuous scopulae, its shape as in fig. 12. Legs relatively long and strong, clothed with hairs and spines; metatarsi and tarsi I and II provided ventrally with conspicuous scopulae and tarsi with prominent claw tufts; leg formula 4123. Male unknown.

*Abdomen* : Longer than wide, nearly elliptical, clothed with hairs, ventral side lighter than dorsal. Epigyne as in fig. 13. Spermathecae as in fig. 14. Spinnerets prominent as in fig. 15.

*Type-specimen* : *Holotype* female in spirit, other details as below.

*Type-locality* : India, West Bengal, Naihati village, 24 Pargannas district, 8.II.1967. Coll. S. K. De.

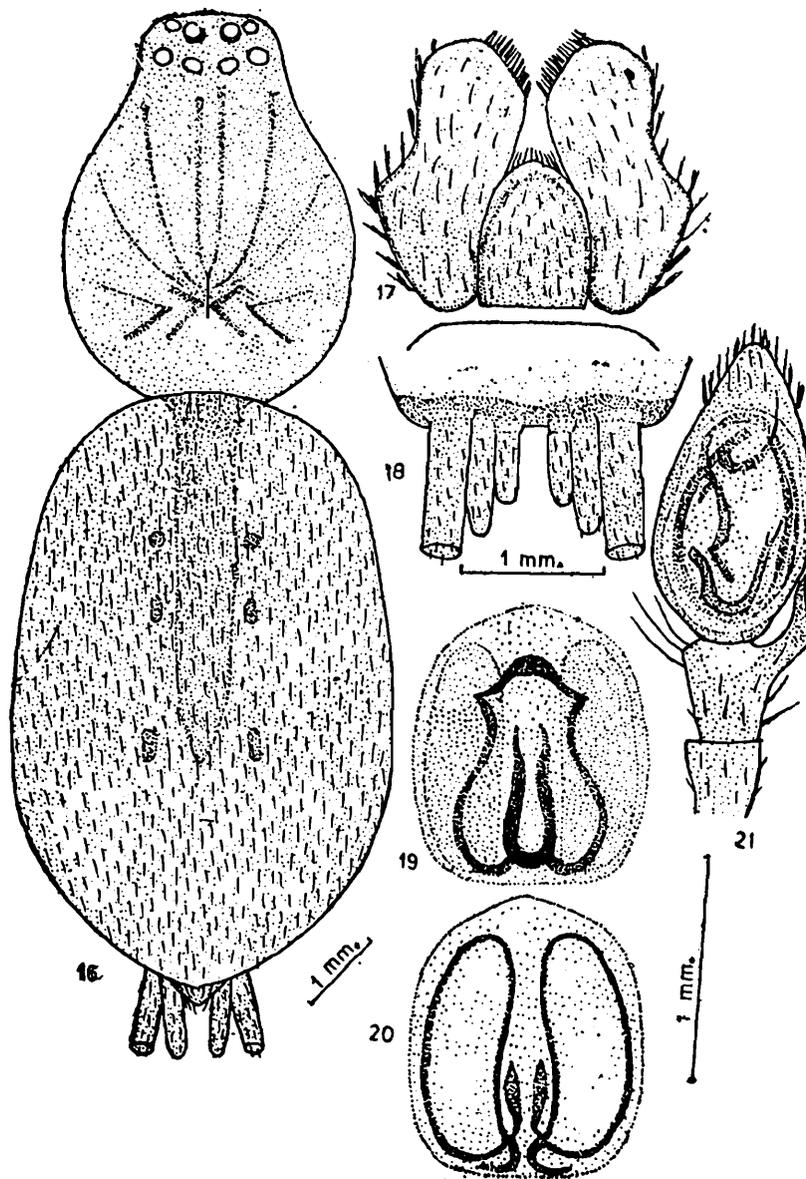
This species resembles *Haplodrassus sataraensis* Tikadar & Gajbe but differs from it as follows : (i) Anterior lateral eyes very slightly larger than anterior medians, but in *H. sataraensis* anterior medians are slightly larger than the anterior laterals. (ii) Abdomen uniform in colour but in *H. sataraensis* abdomen provided with chalk-white chevrons. (iii) Epigyne and spermathecae structurally different in concave arms of the epigynum and spermathecae are oval but not triangular.

#### 4. *Scotophaeus kalimpongensis* sp. nov.

*General* : Cephalothorax and legs reddish-green; abdomen light yellowish green, Total length 11.70 mm. Carapace 4.60 mm. long, 3.70 mm. wide; abdomen 7.20 mm. long, 4.20 mm. wide.

*Cephalothorax* : Longer than wide, convex, narrow in front, clothed with pubescence and some hairs, posterior middle provided with conspicuous fovea. Eyes pearly white except anterior medians which are black; posterior row of eyes slightly longer than anterior row; anterior row of eyes slightly procurved (as seen from in front); anterior medians circular, black, larger than laterals and closer to adjacent laterals than to each other; posterior row of eyes procurved, more or less equal and equidistant from each other; posterior medians silvery white, elliptical in shape as in fig. 16; median ocular quadrangle longer than wide and wider in front than behind. Clypeus narrow, greater than the diameter of anterior median eye, provided with long black setae. Sternum nearly elliptical, pointed behind, with short sclerotized extensions to and between coxae, clothed with hairs. Labium nearly oval, longer than wide, notched at the base; maxillae long, narrowed at middle, raised laterally, their anterior margin provided with conspicuous scopulae as in fig. 17. Chelicerae moderately strong,

vertical ; inner margin with one minute tooth and outer margin with five dissimilar teeth. Legs relatively long and strong, clothed with hairs and some spines, with



Figs. 16-21. *Scotophaeus kalimpongensis* sp. nov.

16. Dorsal view of female, legs omitted. 17. Labium and maxillae. 18. Spinnerets. 19. Epigyne. 20. Spermathecae. 21. Left male palp (ventral view).

scopulae extending up to base of metatarsi I and II ; leg formula 4123. Male specimen smaller, coloured as in female ; male palp as fig. 21.

*Abdomen* : Longer than wide, more or less elliptical, slightly narrowed behind, clothed with mousy hairs ; ventral side slightly lighter than dorsal. Epigyne as in fig. 19. Spermathecae as in fig. 20. Spinnerets prominent, posterior spinnerets longer and larger than others as in fig. 18.

*Type-specimens* : *Holotype* female, *allotype* male in spirit, other details as below.

*Type-locality* : India, West Bengal, Kalimpong, Darjeeling district, date of collection unknown, Coll. *Sutherland*.

This species resembles *Scotophaeus poonaensis* Tikader but differs from it as follows :  
 (i) Cephalothorax reddish-green but in *S poonaensis* outer margin with three teeth.  
 (ii) Epigyne and spermathecae also structurally different in long triangular hood of the epigynum and spermathecae with median projections.

#### SUMMARY

Four new species of the genera *Gnaphosa* Latreille, *Haplodrassus* Chamberlin and *Scotophaeus* Simon, belonging to the family Gnaphosidae are described.

#### ACKNOWLEDGEMENTS

I am thankful to Dr. B. K. Tikader, Former Director, Zoological Survey of India, Calcutta, for guidance and encouragement and to Dr. P. D. Gupta, Officer-in-Charge, Zoological Survey of India, Central Regional Station, Jabalpur for necessary facilities.

I am also thankful to Dr. N. Platnick, Curator, American Museum of Natural History, New York, for help with literature.

I am indebted to Shri Satish Fadnavis, Artist, for preparation of some illustrations and to Miss Pratiksha Tiwari for typing the manuscript.

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